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     (FILE 'HOME' ENTERED AT 11:04:56 ON 05 JUL 2006)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 11:05:07 ON 05 JUL 2006
L1             0 S POLYSACHARIDE? (P) FLUOROCARBON (P) INHAL?
L2             0 S POLYSACCHARIDE? (P) FLUOROCARBON (P) INHAL?
L3             8 S POLYSACCHARIDE? (P) FLUOROCARBON?
L4             2 S POLYSACCHARIDE? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L5             5 S FLUOROCARBON? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L6             2 S FLUOROCARBON? (P) MOLECULAR WEIGHT? (P) INHAL?
L7             0 S FLUOROCARBON? (P) HYALURONIC ACID (P) MOLECULAR WEIGHT?
L8             1 S FLUOROCARBON? (P) HYALURONIC ACID
L9             2 S FLUOROCARBON? (P) CHONDROITIN
L10            0 S FLUOROCARBON? (P) HEPARAN
L11            4 S FLUOROCARBON? (P) HEPARIN
L12          211 S POLYSACCHARIDE? (P) GLYCOSAMINOGLYCAN? (P) MOLECULAR WEIGHT?
L13            0 S  GLYCOSAMINOGLYCAN? (P) FLUOROCARBON? (P) MOLECULAR WEIGHT?
L14            0 S  GLYCOSAMINOGLYCAN? (P) FLUOROCARBON?
L15           34 S  DRUG? (P) FLUOROCARBON? (P) PROPELLANT?
L16            0 S L15 AND POLYSACCHARIDE?
L17            2 S POLYSACCHARIDE? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L18           37 S FLUOROCARBON? (P) DEXTRAN?
L19            5 S L18 AND MOLECULAR WEIGHT?
L20           32 S L18 NOT L19
L21            0 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) PROPELLANT? (P) MOLECULA
L22          250 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) MOLECULAR WEIGHT?
L23            0 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) MOLECULAR WEIGHT? (P) FL
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L3 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:178941 CAPLUS
DOCUMENT NUMBER: 142:375427
TITLE: Non-fluorocarbon paper having flexible starch-based film and method for its production
INVENTOR(S): Sharp, Stuart R.; Egan, Philip A.
PATENT ASSIGNEE(S): Exopack, L.L.C., USA
SOURCE: Can. Pat. Appl., 33 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CA 2467601	AA	20041119	CA 2004-2467601		20040518
PRIORITY APPLN. INFO.:			US 2003-471605P	P	20030519

AB A non-fluorocarbon oil and grease barrier paper is useful particularly with products that need oil and grease resistant characteristics and are used in high or low temperature applications. The barrier paper does not contain fluorocarbons, which improves the environmental rating of the oil and grease barrier paper. The paper is made by applying a starch-based coating having a solid content of 10-35% to a substrate. The starch-based coating preferably contains a starch derivative, a flexibility-enhancing agent, a rheol. agent, and a scorch-resistant agent.

L3 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:806984 CAPLUS
DOCUMENT NUMBER: 133:115609
TITLE: Use of macroporous polypropylene filter to allow identification of bacteria by PCR in human fecal samples
AUTHOR(S): Cavallini, A.; Notarnicola, M.; Berloco, P.; Lippolis, A.; Di Leo, A.
CORPORATE SOURCE: Laboratory of Biochemistry, I.R.C.C.S. 'S. de Bellis', Scientific Institute for Digestive Diseases, Castellana, 70013, Italy
SOURCE: Journal of Microbiological Methods (2000), 39(3), 265-270
CODEN: JMIMDQ; ISSN: 0167-7012
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The detection of pathogenic bacteria directly in human fecal specimens by PCR, requires removal of PCR-inhibitory substances. To investigate whether five different macroporous filters (polypropylene, nylon, polyester, polyethylene, fluorocarbon) could retain polysaccharides, major PCR inhibitors, an in vitro model and human fecal samples were used. The in vitro model consisted of Xanthum gum solns. (3 mg/mL PBS), a bacterial polysaccharide, to which Helicobacter pylori cells were added. Fecal samples from healthy volunteers were spiked with H. pylori and Mycobacterium paratuberculosis cells. Polysaccharide concns. were significantly reduced only by the polypropylene but not by the other filters. Accordingly, both Xanthum gum solns. and spiked fecal specimens became PCR pos. only after filtration with the polypropylene filter. We conclude that this filter can be used to prepare a bacterial DNA template suitable for PCR anal. from human feces.
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:15657 CAPLUS
DOCUMENT NUMBER: 128:106466
TITLE: Method and solution for organ preservation comprising retinal-derived growth factor, cyclodextrin, mucopolysaccharide and fluorocarbo
INVENTOR(S): Brasile, Lauren; Clarke, Jolene
PATENT ASSIGNEE(S): Alliance Pharmaceutical Corp., USA
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 33,629, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5702881	A	19971230	US 1995-476456	19950607
PRIORITY APPLN. INFO.:			US 1993-33629	B2 19930316

AB The present invention is directed to a new preservation solution useful for the initial flushing and for the storage of organs intended for transplantation using a warm preservation technol., between 18° and 37°. Among the components of the preservation solution are a basal mammalian cell culture medium comprising one or more serum proteins, growth factors, particularly retina-derived growth factor, mucopolysaccharides, and emulsified liquid fluorocarbons, and cyclodextrin. A basal culture medium was supplemented with fetal bovine serum, cyclodextrin, chondroitin sulfate, bovine retina-derived growth factor, heparin, and an emulsion containing perfluorooctylbromide. Canine kidneys were isolated and flushed with the above perfusate and pumped at 25-32° on a preservation system.

L3 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:108827 CAPLUS
DOCUMENT NUMBER: 116:108827
TITLE: Use of a new perfluorochemical surfactant to produce a synthetic multipurpose film forming fire-fighting foam concentrate with a Newtonian viscosity
AUTHOR(S): Szonyi, F.; Szonyi, S.; Cambon, A.
CORPORATE SOURCE: Cent. Rech. Anti-Incendie, Univ. Nice-Sophia Antipolis, Nice, 06034, Fr.
SOURCE: Comunicaciones presentadas a la Jornadas del Comite Espanol de la Detergencia (1991), 22, 297-304
CODEN: CJCDD7; ISSN: 0212-7466
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The polysaccharide fluorocarbon derivative Fluotan MX30 was used as a foaming agent for fire-extinguishing compns. effective on both hydrocarbon and polar liquid fires.

L3 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:61052 CAPLUS
DOCUMENT NUMBER: 84:61052
TITLE: Dyeing of cotton fabrics for worn-out look
INVENTOR(S): Sekiya, Shoichi; Masunaga, Toshiyuki; Ichikawa, Michio
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 50116776	A2	19750912	JP 1974-21604	19740222
PRIORITY APPLN. INFO.:			JP 1974-21604 A	19740222

AB Finishing cotton fabrics with aqueous mixts. containing a polysaccharide sizing agent, e.g., locust bean gum (I) [9000-40-2], and a waterproofing agent, e.g., Unikon PM 70 (II) [58052-21-4], (paraffin; I and II contents of the fabric are ≥1 weight% and ≥2 weight%, resp.) followed by dyeing and washing gave fabrics with a worn-out look. Thus, a cotton fabric was immersed in an aqueous mixture containing 2.0% I and 4% II to 80% pickup and dried. The treated fabric was immersed in an aqueous mixture containing Cibacron Turquoise Blue FGF-P 0.5, Cibacron Brilliant Yellow 3 G-P 0.5, urea 10, and Na2CO3 2% to 70% pickup, dried, and baked 3 min at 150°, soaped, immersed in an aqueous mixture containing 0.5% of a desizing agent, padded, steamed 25 sec at 100°, washed, and dried to give a dyed fabric with a good worn-out look rating, compared with poor worn-out look rating for a fabric treated with a similar composition containing poly(vinyl alc.) instead of I. Napolone (methyl cellulose) [9004-67-5], starch [9005-25-8] Cellogen PR (carboxymethyl cellulose) [9004-32-4], and Na alginate [9005-38-3] sizes and Scotchgard FC 208 [30660-57-2] (fluorocarbon) waterproofing agent were also used.

L3 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	1968:37625 CAPLUS
DOCUMENT NUMBER:	68:37625
TITLE:	Nature of the scrapie agent. Membrane hypothesis
AUTHOR(S):	Gibbons, Richard A.; Hunter, Gordon Denis
CORPORATE SOURCE:	Agr. Res. Council Inst. Res. Animal Diseases, Compton, UK
SOURCE:	Biochemical Journal (1967), 105(2), 7P-8P CODEN: BIJOAK; ISSN: 0264-6021
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB The resistance of the scrapie agent to uv. β-propiolactone, HCHO, proteolytic enzymes, heat, and nucleic acid-splitting enzymes places this disease-producing factor in a class by itself. The chemical resistance of the agent eliminates nucleic acid and protein structure whereas lability to periodate indicates that carbohydrate may be involved, although the polysaccharides normally withstand urea or phenol. The fact that extraction with fluorocarbon to remove lipids makes the scrapie agent more labile indicates a cell membrane involvement. This is supported by the similarity of the distribution of scrapie infectivity when homogenized tissue is separated into its subcellular components with that of mouse histocompatibility, a known cell membrane component. It is suggested that the scrapie is due to an altered arrangement of sugars or oligosaccharide units attached to the cell membrane.

L3 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	1959:56969 CAPLUS
DOCUMENT NUMBER:	53:56969
ORIGINAL REFERENCE NO.:	53:10363a-b
TITLE:	Cytochemical and electron microscopical observations on substances associated with fluorocarbon-purified vaccinia virus
AUTHOR(S):	Holt, S. J.; Epstein, M. A.
CORPORATE SOURCE:	Middlesex Hosp., London
SOURCE:	British Journal of Experimental Pathology (1958), 39, 472-9 CODEN: BJEPA5; ISSN: 0007-1021
DOCUMENT TYPE:	Journal
LANGUAGE:	Unavailable

AB Fluorocarbon-treated prepns. of normal chick chorioallantois and of those infected with vaccinia virus were investigated by electron

microscopy and cytochem. techniques. A strongly pos. periodic acid-Schiff type of polysaccharide was present in both prepns., and the vaccinia preparation contained free host cell deoxyribonucleic acid.

L3 ANSWER 8 OF 8 MEDLINE on STN
ACCESSION NUMBER: 2000134232 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10670772
TITLE: Use of macroporous polypropylene filter to allow identification of bacteria by PCR in human fecal samples.
AUTHOR: Cavallini A; Notarnicola M; Berloco P; Lippolis A; De Leo A
CORPORATE SOURCE: Laboratory of Biochemistry, I.R.C.C.S. S. de Bellis, Scientific Institute for Digestive Diseases, Castellana Grotte (BA), Italy.
SOURCE: Journal of microbiological methods, (2000 Feb) Vol. 39, No. 3, pp. 265-70.
Journal code: 8306883. ISSN: 0167-7012.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 14 Mar 2000
Last Updated on STN: 14 Mar 2000
Entered Medline: 2 Mar 2000

AB The detection of pathogenic bacteria directly in human fecal specimens by PCR, requires removal of PCR-inhibitory substances. To investigate whether five different macroporous filters (polypropylene, nylon, polyester, polyethylene, fluorocarbon) could retain polysaccharides, major PCR inhibitors, an in vitro model and human fecal samples were used. The in vitro model consisted of Xanthum gum solutions (3 mg/ml PBS), a bacterial polysaccharide, to which Helicobacter pylori cells were added. Fecal samples from healthy volunteers were spiked with H. pylori and Mycobacterium paratuberculosis cells. Polysaccharide concentrations were significantly reduced only by the polypropylene but not by the other filters. Accordingly, both Xanthum gum solutions and spiked fecal specimens became PCR positive only after filtration with the polypropylene filter. We conclude that this filter can be used to prepare a bacterial DNA template suitable for PCR analysis from human feces.

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:169254 CAPLUS
DOCUMENT NUMBER: 92:169254
TITLE: Mouth and throat treatment composition containing a water-soluble, germicidal compound
INVENTOR(S): Lorch, Elmar; Foth, Heino; Le-Kim, Dac
PATENT ASSIGNEE(S): Fresenius, Dr. Eduard, Chemischpharmazeutische Industrie K.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 2829037	A1	19800110	DE 1978-2829037		19780701
PRIORITY APPLN. INFO.:			DE 1978-2829037	A	19780701

AB An agent for mouth and throat care contained a water-soluble germicidal medium combined with a natural or modified polysaccharide with an average mol. wt. from .apprx.10,000 to .apprx.3,000,000. Thus, a 1000 mL mouth spray comprised H2O 933 mL, hydroxyethyl starch [9005-27-0] (mol. wt. 450,000) 10.0, sorbitol 30.0, KCl 1.20, NaCl 0.84, MgCl2.6H2O 0.052, CaCl2.2H2O 0.146, chlorhexidine gluconate [18472-51-0] (20%) 5.00, CO2 (propellant) .apprx.20.0 g, and aroma .apprx.0.5 mL. In vitro tests indicated this mixture had 30% greater germicidal activity than the same one without hydroxyethyl starch.

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:169254 CAPLUS
DOCUMENT NUMBER: 92:169254
TITLE: Mouth and throat treatment composition containing a water-soluble, germicidal compound
INVENTOR(S): Lorch, Elmar; Foth, Heino; Le-Kim, Dac
PATENT ASSIGNEE(S): Fresenius, Dr. Eduard, Chemischpharmazeutische Industrie K.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2829037	A1	19800110	DE 1978-2829037	19780701
PRIORITY APPLN. INFO.:			DE 1978-2829037 A	19780701

AB An agent for mouth and throat care contained a water-soluble germicidal medium combined with a natural or modified polysaccharide with an average mol. wt. from .apprx.10,000 to .apprx.3,000,000. Thus, a 1000 mL mouth spray comprised H2O 933 mL, hydroxyethyl starch [9005-27-0] (mol. wt. 450,000) 10.0, sorbitol 30.0, KCl 1.20, NaCl 0.84, MgCl2.6H2O 0.052, CaCl2.2H2O 0.146, chlorhexidine gluconate [18472-51-0] (20%) 5.00, CO2 (propellant) .apprx.20.0 g, and aroma .apprx.0.5 mL. In vitro tests indicated this mixture had 30% greater germicidal activity than the same one without hydroxyethyl starch.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:113790 CAPLUS
DOCUMENT NUMBER: 82:113790
TITLE: Hydrazine gels
INVENTOR(S): Vallet, Andre
PATENT ASSIGNEE(S): Societe Europeenne de Propulsion
SOURCE: Fr. Demande, 5 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2207086	A1	19740614	FR 1972-41185	19721120
PRIORITY APPLN. INFO.:			FR 1972-41185 A	19721120

AB N2H4 [302-01-2] for propellants can be converted in an inert dry atm to a gel of almost any desired viscosity with an alkaline salt of heteropolysaccharides produced from sugars by fermentation with Xanthomonas campestris. The polysaccharides have mol. wts . of several million, are composed essentially of monosaccharide (glucose, mannose) complexes, have carboxylic acid residues derived from acetic, pyruvic, or gluconic acid, and are obtainable com. as, e.g., a white powder of apparent d. .apprx.0.52 g/cm3 and purity .apprx.90%. The gelling agent is first dispersed in part of the N2H4 and this dispersion plus remaining N2H4 and gelling agent are dispersed to obtain a content of 1-10% as desired and the mixture is gelled by the action of a perforated vibrating plate. Thus, 65 g XB23 polysaccharide is added during 15 min to 3 l. N2H4 with agitation with a cylindrical stirrer until gelation starts. The mixture is then subjected to vibration at 50 Hz and 2 l. N2H4 and 35 g XB23 are added. Intensive vibration is continued for 10 min and moderate vibration for 50 min longer to form a gel containing 2% XB23,

viscosity 94,000 cP, which decreases at a uniform rate to .apprx.75,000 cP in 10 days.

L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:478093 CAPLUS
DOCUMENT NUMBER: 122:241740
TITLE: Urethane prepolymer compositions for fire-resistant insulating foams
INVENTOR(S): Pauls, Mathias; Schumacher, Rene
PATENT ASSIGNEE(S): Rathor AG, Switz.
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9418268	A1	19940818	WO 1994-EP385	19940210
W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
DE 4303848	A1	19940811	DE 1993-4303848	19930210
AU 9461084	A1	19940829	AU 1994-61084	19940210
AU 691484	B2	19980521		
EP 683805	A1	19951129	EP 1994-907539	19940210
EP 683805	B1	20041020		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
JP 08506371	T2	19960709	JP 1994-517670	19940210
PL 175833	B1	19990226	PL 1994-310175	19940210
AT 280199	E	20041115	AT 1994-907539	19940210
US 2003050357	A1	20030313	US 1999-437276	19991110
US 6750265	B2	20040615		

PRIORITY APPLN. INFO.:		
DE 1993-4303848	A	19930210
DE 1993-4303849	A	19930210
WO 1994-EP385	W	19940210
US 1995-501020	B1	19951016

AB The title compns., useful in pressurized containers, contain essentially halogen-free prepolymers (NCO content 4-20%), 5-40 phr phosph(on)ate triester plasticizers, and propellant gases. A suitable composition contained 275 g mixture of polyol (Desmophen PU 578, OH number 213) 380, cresyl di-Ph phosphate 543, siloxane stabilizer 20, 10% emulsion of liquid polybutadiene (mol. wt. 3000) in castor oil (Tego IMR 830) 50, and amine catalyst 7 parts, 385 g polyisocyanate (Desmodur 44 V20L, 31.6% NCO), 75 g fluorocarbon R 134a, 30 g isobutane, and 35 g Me2O (overall NCO content 15.6%).

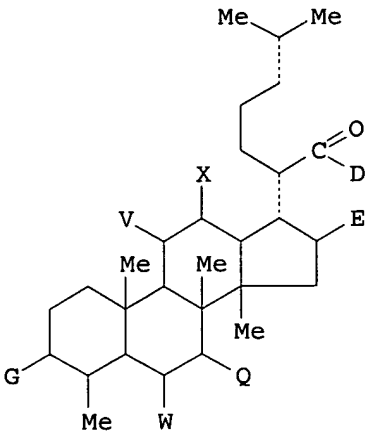
L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:171313 CAPLUS
DOCUMENT NUMBER: 114:171313
TITLE: Pharmaceutical aerosol of polypeptide containing amphiphilic steroid as permeation enhancer
INVENTOR(S): Wang, Yu Chang John; Lee, William A.; Narog, Blair
PATENT ASSIGNEE(S): California Biotechnology, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9009167	A1	19900823	WO 1990-US577		19900201
W: AU, CA, JP					
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE					
US 5011678	A	19910430	US 1989-305520		19890201
AU 9051594	A1	19900905	AU 1990-51594		19900201
PRIORITY APPLN. INFO.:			US 1989-305520	A	19890201
			WO 1990-US577	A	19900201

OTHER SOURCE(S): MARPAT 114:171313

GI



I

AB The title compns. comprise (1) a pharmaceutically active substance, e.g. a polypeptide; (2) a biocompatible steroid I [dashed line = single or double bond; D = group with mol. wt. <600 daltons which renders I water soluble at pH 2-12; E, G = OAc, OH, lower (hetero)alkyl; W = OAc, H; Q, V, X = OH, H]; and (3) a biocompatible (hydro/fluoro)carbon propellant. The steroid contains 2-3 polar functions exclusive of D and is capable of increasing the permeation of a human or animal mucosal surface by a pharmaceutically active substance. The propellant comprises e.g. ≥1 fluorocarbon CnHxClyFz (n = 1-4; x , y, z are such that x + y + z= 2n+2, y+z≥2, and z > 0). Thus, an aerosol formulation was prepared containing Zn insulin, Na tauro-24,25-dihydrofusidate, CCl3F, and CCl2F2. When the composition was administered intranasally to sheep, there was a 2.3 fold increase in bioavailability as compared to control formulation.

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:513107 CAPLUS
DOCUMENT NUMBER: 89:113107
TITLE: Storage-stable aerosol pastes
INVENTOR(S): Shinozawa, Takahiro
PATENT ASSIGNEE(S): Toyo Aerosol Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 53035085	A2	19780401	JP 1976-108880		19760913
JP 56043147	B4	19811009			
PRIORITY APPLN. INFO.:			JP 1976-108880	A	19760913

AB An aerosol starch substitute for clothes is prepared from an aqueous low-mol.-wt. polyethylene (I) [9002-88-4] emulsion (containing

nonionic surfactants with HLB value 8.0-15.0), liquid propellants, and fluorocarbon surfactants. Thus, low-mol.-wt. I 10, Fluorad FC 170 [29117-08-6] 0.2, polyethylene glycol nonylphenyl ether [9016-45-9] (HLB 9.0) 0.3, NaOH 0.1, silicone oil 0.3, and LPG 7.0% were mixed in H2O to give a storage-stable aerosol paste.

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:420678 CAPLUS
DOCUMENT NUMBER: 77:20678
TITLE: Curable methylol-terminated fluorocarbon polymers
INVENTOR(S): Loudas, Basil L.; Rice, David E.
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3647891	A	19720307	US 1968-741299	19680701
PRIORITY APPLN. INFO.:			US 1968-741299 A	19680701

AB Solid rocket propellant binders were prepared from polyisocyanate-cured methylol-terminated fluorocarbon polymers, which were obtained by reducing the corresponding ester precursors with LiAlH4 or NaBH4. Thus, 100 g α,ω-bis(3-methylolhexafluoropropyl) vinylidene fluoride-hexafluoropropylene copolymer (mol. wt. 3000) in 100 ml THF was refluxed with 3 g NaBH4 for 3 hr, and the mixture was blended with dilute HCl to yield 95 g clear diol polymer. A mixture of the polyol 20, polymethylenepoly(phenyl isocyanate) 5, NH4ClO4 55, and powdered Al 20 parts was heated at 70.deg. for 3 days to form a propellant grain, which burned smoothly and completely.

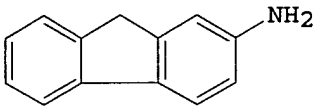
L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:41102 CAPLUS
DOCUMENT NUMBER: 68:41102
TITLE: Aerosol poly(tetrafluoroethylene) composition
INVENTOR(S): Paulus, George F.
PATENT ASSIGNEE(S): Acheson Industries, Inc.
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3361679	A	19680102	US 1967-607387	19670105
PRIORITY APPLN. INFO.:			US 1967-607387 A	19670105

AB Aerosol compns. which are used in forming low-friction coatings were prepared consisting essentially of a low mol. wt. fluorocarbon polymer, thermoplastic resin, solvent, and a propellant. Thus, to a dispersion prepared by mixing PrOAc 125, BuOH 6.2, PhMe 17.2, and iso-PrOH 2.1 parts, 31.5 parts 0.5-sec. nitrocellulose (I) and 18 parts low mol. wt. poly(tetrafluoroethylene) were added and blended to form a uniform concentrated dispersion. A diluent blend (100 parts) of organic solvents comprising iso-PrOH 1, BuOH 3, PhMe 8, and PrOAc 23 parts was added to 100 parts of the concentrated dispersion. A portion of this diluted dispersion was blended with an equal amount of CCl2F2 at -20° and placed in a metallic pressure atomization container at 5 atmospheric The pressurized contents were

used for coating steel panels to give an adherent film having a low coefficient of friction. I may be replaced by Et cellulose, Vinylite VMCH, Butvar B-76, Acryloid B-72, or cellulose acetate butyrate.

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:126407 CAPLUS
DOCUMENT NUMBER: 108:126407
TITLE: Fluorocarbon-enhanced mutagenesis of polyaromatic hydrocarbons
AUTHOR(S): Mahurin, R. G.; Bernstein, R. L.
CORPORATE SOURCE: Dep. Biol. Sci., San Francisco State Univ., San Francisco, CA, 94132, USA
SOURCE: Environmental Research (1988), 45(1), 101-7
CODEN: ENVRAL; ISSN: 0013-9351
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The widely used fluorocarbon refrigerant and cleaning solvent 1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF), though generally considered biol. inert, enhances the metabolic activation of chemical carcinogens. Liver microsomal exts. from mice given single i.p. injections of this fluorocarbon showed significant increases in their ability to activate carcinogenic polyarom. hydrocarbons to form mutagens, compared to control mice injected with saline. The polyarom. hydrocarbons 2-aminofluorene (I) and 2-acetylaminofluorene were activated in this way. Mutagenicity was measured by a microbial assay. Both com. grade and redistd. fluorocarbons gave similar results, i.e., more highly active liver exts. after administration of the fluorocarbon preparation to mice. Neither the industrial grade nor the redistd. preparation was itself mutagenic. A combined liver microsomal extract from mice breathing Freon TF at 20,000 ppm in air for 8 h also had enhanced ability to activate I as a mutagen. Exposing mice to Freon TF by inhalation more closely matches the normal route of human exposure to fluorocarbons. The results of this study imply that low-mol.-wt. fluorocarbons may pose a carcinogenic risk by acting as cocarcinogenic enhancers of carcinogen activation. The possibility that fluorocarbons are cocarcinogens in this way has apparently not been heretofore considered.

L6 ANSWER 2 OF 2 MEDLINE on STN
ACCESSION NUMBER: 88111480 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3338429
TITLE: Fluorocarbon-enhanced mutagenesis of polyaromatic hydrocarbons.
AUTHOR: Mahurin R G; Bernstein R L
CORPORATE SOURCE: Department of Biological Sciences, San Francisco State University, California 94132.
SOURCE: Environmental research, (1988 Feb) Vol. 45, No. 1, pp. 101-7.
Journal code: 0147621. ISSN: 0013-9351.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198803
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 17 Mar 1988

AB The widely used fluorocarbon refrigerant and cleaning solvent 1,1,2-trichloro-1,2,2-trifluoroethane (Freon TF), though generally considered biologically inert, enhances the metabolic activation of chemical carcinogens. Liver microsomal extracts from mice given single intraperitoneal injections of this fluorocarbon showed significant increases in their ability to activate carcinogenic polyaromatic hydrocarbons to form mutagens, compared to control mice injected with saline. Polyaromatic hydrocarbons aminofluorene and acetylaminofluorene were activated in this way. Mutagenicity was measured by a microbial assay. Both commercial grade and redistilled fluorocarbons gave similar results, that is, more highly active liver extracts after administration of the fluorocarbon preparation to mice. Neither industrial grade nor redistilled preparation was itself mutagenic. A combined liver microsomal extract from mice breathing Freon TF at 20,000 ppm in air for 8 hr also had enhanced ability to activate aminofluorene as a mutagen. Exposing mice to Freon TF by inhalation more closely matches the normal route of human exposure to fluorocarbons. The results of this study imply that low-molecular-weight fluorocarbons may pose a carcinogenic risk by acting as cocarcinogenic enhancers of carcinogen activation. The possibility that fluorocarbons are cocarcinogens in this way has apparently not been heretofore considered.

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:441602 CAPLUS
DOCUMENT NUMBER: 133:63985
TITLE: Aerosol formulations for buccal and pulmonary application
INVENTOR(S): Modi, Pankaj
PATENT ASSIGNEE(S): Generex Pharmaceuticals Inc., Can.
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037051	A1	20000629	WO 1999-CA1231	19991216
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6436367	B1	20020820	US 1999-251464	19990217
US 6312665	B1	20011106	US 1999-386284	19990831
CA 2354148	AA	20000629	CA 1999-2354148	19991216
EP 1140019	A1	20011010	EP 1999-962009	19991216
EP 1140019	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002532536	T2	20021002	JP 2000-589162	19991216
NZ 512188	A	20021025	NZ 1999-512188	19991216
AU 760445	B2	20030515	AU 2000-18518	19991216
AT 243498	E	20030715	AT 1999-962009	19991216

PRIORITY APPLN. INFO.:			
US 1998-113239P	P	19981221
US 1999-251464	A	19990217
US 1999-386284	A	19990831
WO 1999-CA1231	W	19991216

AB A mixed micellar aerosol pharmaceutical formulation includes a micellar protein pharmaceutical agent, an alkali metal lauryl sulfate, at least three micelle forming compds., a phenol and a propellant. The micelle forming compds. are selected from the group consisting of lecithin, hyaluronic acid, pharmaceutically acceptable salts of hyaluronic acid, glycolic acid, lactic acid, chamomile extract, cucumber extract, oleic acid, linoleic acid, linolenic acid, monoolein, monooleates, monolaurates, borage oil, evening of primrose oil, menthol, trihydroxy oxocholanyl glycine and pharmaceutically acceptable salts thereof, glycerin, polyglycerin, lysine, polylysine, triolein, polyoxyethylene ethers and analogs thereof, polydocanol alkyl ethers and analogs thereof, chenodeoxycholate and deoxycholate. The amount of each micelle forming compound is present in a concentration of from 1 to 20 weight/weight% of the total formulation, and the total concentration of micelle forming compds. are less than 50 weight/weight% of the formulation. The propellant, e.g., a fluorocarbon propellant, provides enhanced absorption of the pharmaceutical agent, particularly in the buccal cavity. An example was given using insulin as the active ingredient.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:15657 CAPLUS
DOCUMENT NUMBER: 128:106466
TITLE: Method and solution for organ preservation comprising retinal-derived growth factor, cyclodextrin, mucopolysaccharide and fluorocarbo
INVENTOR(S): Brasile, Lauren; Clarke, Jolene
PATENT ASSIGNEE(S): Alliance Pharmaceutical Corp., USA
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 33,629, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5702881	A	19971230	US 1995-476456	19950607
PRIORITY APPLN. INFO.:			US 1993-33629 B2	19930316

AB The present invention is directed to a new preservation solution useful for the initial flushing and for the storage of organs intended for transplantation using a warm preservation technol., between 18° and 37°. Among the components of the preservation solution are a basal mammalian cell culture medium comprising one or more serum proteins, growth factors, particularly retina-derived growth factor, mucopolysaccharides, and emulsified liquid fluorocarbons, and cyclodextrin. A basal culture medium was supplemented with fetal bovine serum, cyclodextrin, chondroitin sulfate, bovine retina-derived growth factor, heparin, and an emulsion containing perfluorooctylbromide. Canine kidneys were isolated and flushed with the above perfusate and pumped at 25-32° on a preservation system.

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:676194 CAPLUS
DOCUMENT NUMBER: 121:276194
TITLE: Preservation solution and method for warm organ preservation
INVENTOR(S): Brasile, Lauren; Clarke, Jolene
PATENT ASSIGNEE(S): Alliance Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9421116	A1	19940929	WO 1994-US2831	19940316
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9464095	A1	19941011	AU 1994-64095	19940316
PRIORITY APPLN. INFO.:			US 1993-33629 A	19930316
			WO 1994-US2831 W	19940316

AB The present invention is directed to a new hyperosmolar preservation solution useful for the initial flushing and for the storage of organs intended for transplantation using a warm preservation technol., of 18-35°. Among the components of the preservation solution are a basal medium comprising impermeant, mucopolysaccharide, and a high magnesium content, and an emulsified liquid fluorocarbon. Preservation of canine kidneys using basal perfusate supplemented with 1-bromoheptadecafluorooctane (PFOB) was superior to both preservation using PFOB alone and preservation using the

vasal solution alone. Preservation using PFOB supplemented basal solution totally eliminated reperfusion injury, provided a higher O tension, and supported better preservation as demonstrated by better reperfusion upon autotransplantation, increased urine production, and better postoperative chems.

L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:548517 CAPLUS
DOCUMENT NUMBER: 129:166237
TITLE: Fluorocarbon propellants for medical aerosol formulations
INVENTOR(S): Keller, Manfred; Herzog, Kurt
PATENT ASSIGNEE(S): Jago Pharma A.-G., Switz.
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9834595	A1	19980813	WO 1998-CH37	19980202
W: AU, CA, JP, NO, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2280099	AA	19980813	CA 1998-2280099	19980202
CA 2280099	C	20051227		
AU 9856496	A1	19980826	AU 1998-56496	19980202
AU 718967	B2	20000504		
EP 1014943	A1	20000705	EP 1998-900837	19980202
EP 1014943	B1	20020619		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
NZ 337065	A	20010223	NZ 1998-337065	19980202
JP 2001511160	T2	20010807	JP 1998-533479	19980202
AT 219355	E	20020715	AT 1998-900837	19980202
PT 1014943	T	20021129	PT 1998-900837	19980202
ES 2178817	T3	20030101	ES 1998-900837	19980202
ZA 9800937	A	19980806	ZA 1998-937	19980205
NO 9903773	A	19991004	NO 1999-3773	19990804
US 6461591	B1	20021008	US 1999-355883	19990804

PRIORITY APPLN. INFO.: CH 1997-248 A 19970205
WO 1998-CH37 W 19980202

AB A pressure-liquefied propellant mixture for aerosols comprising a fluoridated alkane [especially 1,1,1,2-tetrafluoroethane and/or 1,1,1,2,3,3,3-heptafluoropropane (HFA 227)] and CO2 improves the wetting properties for pharmaceutical active substances, whereby existing formulation problems with hydrofluoroalkanes in suspension and solution aerosols can be overcome and improved medical aerosol formulations can be obtained. By using CO2, the pressure and hence the particle size distribution can be influenced in a targeted manner, and by removing O2 from the hydrofluoroalkanes the stability during storage of oxidation-sensitive active substances can be improved. Thus, 1.5 kg HFA 227 was gassed with CO2 and added at 6.5 bar and 20° to a solution of beclomethasone dipropionate 2.5 and oleic acid 0.25 in EtOH 55 g in a pressurized vessel; the mixture was dispensed into Al aerosol canisters. The mean aerodynamic particle diameter and fine particle dose per stroke of the dosing valve were .apprx.1.3 μm and 61.5 μg, resp., immediately after filling the canisters; after 6 mo storage at 30° and 70% relative humidity, these values were .apprx.1.3 μm and 71.8 μg, resp.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:15657 CAPLUS
DOCUMENT NUMBER: 128:106466
TITLE: Method and solution for organ preservation comprising retinal-derived growth factor, cyclodextrin, mucopolysaccharide and fluorocarbo

INVENTOR(S): Brasile, Lauren; Clarke, Jolene
PATENT ASSIGNEE(S): Alliance Pharmaceutical Corp., USA
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 33,629, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5702881	A	19971230	US 1995-476456	19950607
PRIORITY APPLN. INFO.:			US 1993-33629	B2 19930316

AB The present invention is directed to a new preservation solution useful for the initial flushing and for the storage of organs intended for transplantation using a warm preservation technol., between 18° and 37°. Among the components of the preservation solution are a basal mammalian cell culture medium comprising one or more serum proteins, growth factors, particularly retina-derived growth factor, mucopolysaccharides, and emulsified liquid fluorocarbons, and cyclodextrin. A basal culture medium was supplemented with fetal bovine serum, cyclodextrin, chondroitin sulfate, bovine retina-derived growth factor, heparin, and an emulsion containing perfluorooctylbromide. Canine kidneys were isolated and flushed with the above perfusate and pumped at 25-32° on a preservation system.

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:116853 CAPLUS
DOCUMENT NUMBER: 120:116853
TITLE: Topical drug formulation.
INVENTOR(S): Gross, Udo; Roeding, Joachim; Stanzl, Klaus; Zastrow, Leonhard
PATENT ASSIGNEE(S): Lancaster Group AG, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4221256	A1	19940105	DE 1992-4221256	19920626
DE 4221256	C2	19970710		
IL 105946	A1	19970218	IL 1993-105946	19930608
WO 9400110	A1	19940106	WO 1993-DE574	19930624
W: AU, CA, CZ, FI, HU, JP, NO, NZ, PL, RO, SK, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9343080	A1	19940124	AU 1993-43080	19930624
AU 671646	B2	19960905		
EP 647132	A1	19950412	EP 1993-912638	19930624
EP 647132	B1	19951206		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
HU 68984	A2	19950828	HU 1994-3738	19930624
AT 131041	E	19951215	AT 1993-912638	19930624
JP 08501077	T2	19960206	JP 1993-501956	19930624
ES 2083287	T3	19960401	ES 1993-912638	19930624
PL 172328	B1	19970930	PL 1993-306535	19930624
CZ 283703	B6	19980617	CZ 1994-3265	19930624
SK 279820	B6	19990413	SK 1994-1565	19930624
ZA 9304572	A	19940131	ZA 1993-4572	19930625
NO 9404957	A	19941221	NO 1994-4957	19941221
NO 306973	B1	20000124		

FI 9406058	A	19941223	FI 1994-6058		19941223
US 5686102	A	19971111	US 1996-674851		19960703
PRIORITY APPLN. INFO.:			DE 1992-4221256	A	19920626
			WO 1993-DE574	A	19930624
			US 1994-362504	B1	19941222

AB Drugs are formulated for topical application as asym. lamellar aggregates containing phospholipids and fluorocarbons, such as perfluorodecalin or perfluorotributylamine.

L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:131528 CAPLUS
DOCUMENT NUMBER: 76:131528
TITLE: Heparinization of plastics to render them nonthrombogenic
INVENTOR(S): Dyck, Manfred F.
PATENT ASSIGNEE(S): Cordis Corp.
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 3639141	A	19720201	US 1968-762376		19680916
PRIORITY APPLN. INFO.:			US 1968-762376	A	19680916

AB Nonthrombogenic properties were imparted to a plastic by treating it with (MeO)3Si(CH2)3NH(CH2)2NH2 in an organic solvent which is capable of swelling the plastic, and thereafter treating the plastic with H2O and heparin to cause hydrolysis of the silane and bonding thereto of heparin. In the case of a fluorocarbon plastic, an initial treatment with Na is necessary in order to render the polymer bondable to other materials.

L17 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:169254 CAPLUS
DOCUMENT NUMBER: 92:169254
TITLE: Mouth and throat treatment composition containing a water-soluble, germicidal compound
INVENTOR(S): Lorch, Elmar; Foth, Heino; Le-Kim, Dac
PATENT ASSIGNEE(S): Fresenius, Dr. Eduard, Chemischpharmazeutische Industrie K.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2829037	A1	19800110	DE 1978-2829037	19780701
PRIORITY APPLN. INFO.:			DE 1978-2829037 A	19780701

AB An agent for mouth and throat care contained a water-soluble germicidal medium combined with a natural or modified polysaccharide with an average mol. wt. from .apprx.10,000 to .apprx.3,000,000. Thus, a 1000 mL mouth spray comprised H2O 933 mL, hydroxyethyl starch [9005-27-0] (mol. wt. 450,000) 10.0, sorbitol 30.0, KCl 1.20, NaCl 0.84, MgCl2.6H2O 0.052, CaCl2.2H2O 0.146, chlorhexidine gluconate [18472-51-0] (20%) 5.00, CO2 (propellant) .apprx.20.0 g, and aroma .apprx.0.5 mL. In vitro tests indicated this mixture had 30% greater germicidal activity than the same one without hydroxyethyl starch.

L17 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:113790 CAPLUS
DOCUMENT NUMBER: 82:113790
TITLE: Hydrazine gels
INVENTOR(S): Vallet, Andre
PATENT ASSIGNEE(S): Societe Europeenne de Propulsion
SOURCE: Fr. Demande, 5 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2207086	A1	19740614	FR 1972-41185	19721120
PRIORITY APPLN. INFO.:			FR 1972-41185 A	19721120

AB N2H4 [302-01-2] for propellants can be converted in an inert dry atm to a gel of almost any desired viscosity with an alkaline salt of heteropolysaccharides produced from sugars by fermentation with Xanthomonas campestris. The polysaccharides have mol. wts . of several million, are composed essentially of monosaccharide (glucose, mannose) complexes, have carboxylic acid residues derived from acetic, pyruvic, or gluconic acid, and are obtainable com. as, e.g., a white powder of apparent d. .apprx.0.52 g/cm3 and purity .apprx.90%. The gelling agent is first dispersed in part of the N2H4 and this dispersion plus remaining N2H4 and gelling agent are dispersed to obtain a content of 1-10% as desired and the mixture is gelled by the action of a perforated vibrating plate. Thus, 65 g XB23 polysaccharide is added during 15 min to 3 l. N2H4 with agitation with a cylindrical stirrer until gelation starts. The mixture is then subjected to vibration at 50 Hz and 2 l. N2H4 and 35 g XB23 are added. Intensive vibration is continued for 10 min and moderate vibration for 50 min longer to form a gel containing 2% XB23,

viscosity 94,000 cP, which decreases at a uniform rate to .apprx.75,000 cP in 10 days.

L19 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:271075 CAPLUS
DOCUMENT NUMBER: 129:38214
TITLE: High microvascular endothelial water permeability in mouse lung measured by a pleural surface fluorescence method
AUTHOR(S): Carter, Ethan P.; Olveczky, Bence P.; Matthay, Michael A.; Verkman, A. S.
CORPORATE SOURCE: Department of Medicine and Physiology, University of California, San Francisco, CA, 94143, USA
SOURCE: Biophysical Journal (1998), 74(4), 2121-2128
CODEN: BIOJAU; ISSN: 0006-3495
PUBLISHER: Biophysical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Transport of water between the capillary and airspace compartments in lung encounters serial barriers: the alveolar epithelium, interstitium, and capillary endothelium. We previously reported a pleural surface fluorescence method to measure net capillary-to-airspace water transport. To measure the osmotic water permeability across the microvascular endothelial barrier in intact lung, the airspace was filled with a water-immiscible fluorocarbon. The capillaries were perfused via the pulmonary artery with solns. of specified osmolalites containing a high-mol.-wt. fluorescent dextran. An increase in perfusate osmolality produced a prompt decrease in surface fluorescence due to dye dilution in the capillaries, followed bat a slower return to initial fluorescence as capillary and lung interstitial osmolality equilibrate. A math. model was developed to determine the osmotic water permeability coefficient (Pf) of lung microvessels from the time course of pleural surface fluorescence. As predicted, the magnitude of the prompt change in surface fluorescence increased with decreased pulmonary artery perfusion rate and increased osmotic gradient size. With raffinose used to induce the osmotic gradient, Pf was 0.03 cm/s at 23°C and was reduced 54% by 0.5 mM HgCl2. Temperature dependence measurements gave an Arrhenius activation energy (Ea) of 5.4 kcal/mol (12-370C). The apparent Pf induced by the smaller osmolytes mannitol and glycine was 0.021 and 0.011 cm/s (23°C). Immunoblot anal. showed .apprx.1.4 x 1012 aquaporin-1 water channels/cm2 of capillary surface, which accounted quant. for the high Pf. These results establish a novel method for measuring osmotically driven water permeability across microvessels in intact lung. The high Pf, low Ea, and mercurial inhibition indicate the involvement of mol. water channels in water transport across the lung endothelium.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1974:87524 CAPLUS
DOCUMENT NUMBER: 80:87524
TITLE: Blood substitute containing fluorocarbons
INVENTOR(S): Watanabe, Ryohzoh; Yokoyama, Kazumasa
PATENT ASSIGNEE(S): Midori Juji K. K.; Tanabe Seiyaku Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48030376	B4	19730919	JP 1970-126452	19701229
PRIORITY APPLN. INFO.:			JP 1970-126452	19701229

AB Blood substitutes having large O-carrying capacities can be prepared from fluorocarbons. Thus, 600g poly(oxyethylene)-poly(oxypropylene) (average mol. wt. 8300) was dissolved in 6 l. H2O and filtered; 40 kg perfluorotributylamine was added; the volume of the mixture was adjusted to 10 l. with H2O; the mixture was emulsified and mixed with 10 l. dextran (average mol. wt. 40,000); the mixture was stirred and centrifuged; the precipitate was dispersed in 5 l. H2O and NaCl 5.26, KCl 0.37, MgCl2 0.14, NaOAc 2,22, and Na gluconate 5.02 g were added. The total volume was adjusted to 8 l. with H2O and the emulsion was centrifuged; the supernatant containing 40% fluorocarbon was sterilized and sealed in ampules or bottles. Dogs and monkeys underwent whole blood transfusion with blood containing emulsion to 3% of hematocrite values. The animals survived without showing any apparent abnormality. The animals were sacrificed and autopsied 3 months after transfusion, indicating no harm to internal organs.

L19 ANSWER 3 OF 5 MEDLINE on STN
ACCESSION NUMBER: 1998204632 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9545071
TITLE: High microvascular endothelial water permeability in mouse lung measured by a pleural surface fluorescence method.
AUTHOR: Carter E P; Olveczky B P; Matthay M A; Verkman A S
CORPORATE SOURCE: Department of Medicine, Cardiovascular Research Institute, University of California, San Francisco 94143, USA.
CONTRACT NUMBER: DK35124 (NIDDK)
DK43840 (NIDDK)
HL51854 (NHLBI)
+
SOURCE: Biophysical journal, (1998 Apr) Vol. 74, No. 4, pp. 2121-8. Journal code: 0370626. ISSN: 0006-3495.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 18 Jun 1998
Last Updated on STN: 18 Jun 1998
Entered Medline: 8 Jun 1998

AB Transport of water between the capillary and airspace compartments in lung encounters serial barriers: the alveolar epithelium, interstitium, and capillary endothelium. We previously reported a pleural surface fluorescence method to measure net capillary-to-airspace water transport. To measure the osmotic water permeability across the microvascular endothelial barrier in intact lung, the airspace was filled with a water-immiscible fluorocarbon. The capillaries were perfused via the pulmonary artery with solutions of specified osmolalites containing a high-molecular-weight fluorescent dextran. An increase in perfusate osmolality produced a prompt decrease in surface fluorescence due to dye dilution in the capillaries, followed by a slower return to initial fluorescence as capillary and lung interstitial osmolality equilibrate. A mathematical model was developed to determine the osmotic water permeability coefficient (Pf) of lung microvessels from the time course of pleural surface fluorescence. As predicted, the magnitude of the prompt change in surface fluorescence increased with decreased pulmonary artery perfusion rate and increased osmotic gradient size. With raffinose used to induce the osmotic gradient, Pf was 0.03 cm/s at 23 degrees C and was reduced 54% by 0.5 mM HgCl2. Temperature dependence measurements gave an Arrhenius activation energy (Ea) of 5.4 kcal/mol (12-37 degrees C). The apparent Pf induced by the smaller osmolytes mannitol and glycine was 0.021 and 0.011 cm/s (23 degrees C). Immunoblot analysis showed approximately 1.4 x 10(12) aquaporin-1 water channels/cm2 of capillary surface, which accounted quantitatively for the high Pf. These results establish a novel method for measuring osmotically driven water permeability across microvessels in

intact lung. The high Pf, low Ea, and mercurial inhibition indicate the involvement of molecular water channels in water transport across the lung endothelium.

L19 ANSWER 4 OF 5 MEDLINE on STN
ACCESSION NUMBER: 95154034 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7851140
TITLE: [Artificial blood substitutes].
Kunstlicher Blutersatz.
AUTHOR: Forster H
CORPORATE SOURCE: Abteilung II, Universitatsklinikum Frankfurt/Main.
SOURCE: Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen, (1994 Dec) Vol. 65, No. 12, pp. 1085-94. Ref: 22
Journal code: 16140410R. ISSN: 0009-4722.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199503
ENTRY DATE: Entered STN: 22 Mar 1995
Last Updated on STN: 22 Mar 1995
Entered Medline: 15 Mar 1995

AB The most important function of blood is gas transport. In the attempt to replace this function, two lines of investigation were followed. Gas transport using of hemoglobin involves saturable physicochemical mechanisms. The affinity of human "stroma-free" hemoglobin for oxygen is too high, hampering the release of oxygen in tissue. The binding of oxygen to stroma-free hemoglobin can be improved by coupling of hemoglobin to pyridoxal phosphate. By cross-linking with, for example, dialdehydes (particularly glutaraldehyde) the production of hemoglobin molecules of higher molecular weight and greater stability is possible. However, first trials in humans using these preparations fall short of expectations. The stability of the polymers and of the preparations was not as good as expected. Another possibility is the use of water-insoluble fluorocarbons (perfluorocarbons), which have a high capacity for physical gas transport. The disadvantage of using emulsions of these substances is the necessity for high partial oxygen pressure to attain sufficient gas transport. The complete insolubility in water impedes the use of the metabolic inert fluorocarbons, because they can only be eliminated via the lungs. Despite these problems the fluorocarbons have been extensively used in humans. In the USA the use of some emulsions is allowed for special indications. Extended clinical use of fluorocarbons and of hemoglobin derivates cannot be expected in the near future. Substitution of the blood hydrocolloid albumin has been practiced for many years, synthetic hydrocolloids being used to replace the colloid osmotic pressure of albumin and also to decrease the blood viscosity by hemodilution and hence improve flow. In Germany hydroxyethyl starch (HES) is the most-used hydrocolloid with the least side effects. Anaphylactic reactions restrict the use of dextran, and gelatin derivatives, because of their short half-life, are not of clinical importance in Germany. Hydrocolloids with a half-life of 3-6 h (dextran 40, middle-substituted HES) are preferred, while those with a half-life of about 20-30 h (dextran 60/70, highly substituted HES) are infrequently used.

L19 ANSWER 5 OF 5 MEDLINE on STN
ACCESSION NUMBER: 89027205 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2460167
TITLE: Treatment of ischemic cerebrovascular diseases: the comparative studies between fluorocarbon blood substitute (FCBS) and low molecular weight dextran (LMWD).
AUTHOR: Chen H S; Yong Z H; Chen M B

CORPORATE SOURCE: Research Institute of Surgery, Third Military Medical College, Chongqing, People's Republic of China.
SOURCE: Biomaterials, artificial cells, and artificial organs, (1988) Vol. 16, No. 1-3, pp. 617-8.
Journal code: 8802605. ISSN: 0890-5533.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198812
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 3 Mar 2000
Entered Medline: 8 Dec 1988

L20 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1982:400500 CAPLUS
DOCUMENT NUMBER: 97:500
TITLE: Comparison of acute cardiovascular effects and oxygen-supply following hemodilution with dextran, stroma-free hemoglobin solution and fluorocarbon suspension
AUTHOR(S): Biro, George P.
CORPORATE SOURCE: Fac. Health Sci., Univ. Ottawa, Ottawa, ON, Can.
SOURCE: Cardiovascular Research (1982), 16(4), 194-204
CODEN: CVREAU; ISSN: 0008-6363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Changes in hemodynamics and myocardial O-supply were investigated in anesthetized dogs, when the hematocrit was reduced to 18-22% by isovolemic hemodilution with 8% stroma-free Hb solution, 20% Fluosol-DA [75216-20-5] and 6% dextran 70 [9004-54-0]. Comparable hemodilution and comparable reduction in whole-blood viscosity was not followed by similar changes in cardiac output: dextran- and Fluosol-diluted dogs showed significantly elevated cardiac output, whereas Hb-diluted dogs failed to do so. As a result, systemic O-transport was better maintained with dextran and Fluosol. Myocardial blood flow increased in all 3 hemodiluted groups, but O-supply was not similar. The Hb-diluted dogs showed inadequate O-supply, suggested by a fall of coronary sinus pO2; dextran-diluted dogs exhibited adequate O-supply, whereas the Fluosol-diluted group had excessive O-supply. Apparently, similar degrees of hemodilution may not be followed by comparable changes in hemodynamics and O-supply, depending on O-unloading characteristics.

L20 ANSWER 16 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:636124 CAPLUS
DOCUMENT NUMBER: 93:236124
TITLE: Insulin secretion by the perfused pancreas of the cold-acclimated rat
AUTHOR(S): Baroody, George M.; Howland, Roger J.
CORPORATE SOURCE: Dep. Hum. Biol., Univ. Surrey, Guildford/Surrey, GU2 5XH, UK
SOURCE: Canadian Journal of Physiology and Pharmacology (1980), 58(12), 1426-30
CODEN: CJPPA3; ISSN: 0008-4212
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pancreases of normal and cold-acclimated (4° for 42 days) rats were isolated and perfused with Krebs-Henseleit HCO3- medium containing dextran, adenosine, glucose, and a fluorocarbon as O carrier. The biphasic secretion pattern of insulin in response to glucose stimulation was evident in both groups. Both basal and glucose-induced insulin release from pancreases of cold-acclimated rats exhibited a very significant reduction in comparison with controls. Cold-acclimation, an altered steady state of metabolism, appears to be characterized by enhanced sympathetic activity which reduces insulin availability and release. Consequently enhanced free fatty acid mobilization resulting from reduced inhibition by insulin of lipolysis in the peripheral fat depots and increased lipolysis resulting from sympathetic activation are seen.

L20 ANSWER 17 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:443810 CAPLUS
DOCUMENT NUMBER: 93:43810
TITLE: Latex reagent for diagnosis of adenovirus infection
INVENTOR(S): Tomiyama, Tetsuo
PATENT ASSIGNEE(S): Fuji Zoki Seiyaku K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55030658	A2	19800304	JP 1978-103896	19780828

PRIORITY APPLN. INFO.: JP 1978-103896 A 19780828

AB A reagent for the diagnosis of adenovirus infection is prepared by the reaction of adenovirus antigen with polystyrene latex having a sp. gr. >1.14 and particle size >0.91 μm to form an adenovirus antigen-sensitized latex. Thus, adenovirus was inoculated into HeLa cells or Vers cells at 36°, and the cells were collected by centrifugation. The cells were subjected to freezing and thawing several times or sonicated at 10-20 kilocycles for 2-3 min to release the antigen. The crude antigen in phosphate-buffered saline (PBS) was treated with an equal volume of fluorocarbons, and the mixture were centrifuged at 1000 rpm for 5 min for purification Polystyrene latex suspended in PBS was mixed with an equal volume of the prepared antigen, and the mixture was incubated at room temperature for 2-4 h, washed with PBS and then PBS containing 1% NRS and 0.1% NaN3, resuspended in PBS containing 1% NRS, 0.1% NaN3, 0.5% glycine, and 0.7% dextran T-10, and freeze dried to give a preparation for use in agglutination tests.

L20 ANSWER 18 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1971:516564 CAPLUS
DOCUMENT NUMBER: 75:116564
TITLE: Oncotic pressure of organ perfusates
AUTHOR(S): Marty, A. T.; Intaglietta, M.
CORPORATE SOURCE: Dep. Surg., Univ. California, La Jolla, CA, USA
SOURCE: Biochimica e Biologia Sperimentale (1970), 9(3), 171-4
CODEN: BBSPAJ; ISSN: 0006-2995
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The colloid osmotic pressures of commonly used organ perfusates were determined by using an electronic membrane osmometer. When equivalent concns. were tested, dextrans and pluronic-fluorocarbon mixts. were found to exert much higher oncotic pressures than normal heparinized human plasma or stroma free HbO2 solution These data will aid in the selection of proper perfusate colloid concentration It was suggested that monitoring the weight change induced by pulses of 10% dextran might help determine the microvascular integrity of the perfused organ.

L20 ANSWER 19 OF 32 MEDLINE on STN
ACCESSION NUMBER: 91276882 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2055848
TITLE: Volume flow across the alveolar epithelium of adult rat lung.
AUTHOR: Ballard S T; Gatzy J T
CORPORATE SOURCE: Curriculum in Toxicology, School of Medicine, University of North Carolina, Chapel Hill 27514.
CONTRACT NUMBER: ES-07126 (NIEHS)
HL-34322 (NHLBI)
SOURCE: Journal of applied physiology (Bethesda, Md. : 1985), (1991 Apr) Vol. 70, No. 4, pp. 1665-76.
Journal code: 8502536. ISSN: 8750-7587.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199108

ENTRY DATE: Entered STN: 18 Aug 1991
Last Updated on STN: 18 Aug 1991
Entered Medline: 1 Aug 1991

AB We separated the solute and water flow across the alveolar epithelium from flow across airway epithelia of the adult rat. Small volumes (0.5-1.0 ml) of Krebs-Ringer bicarbonate (KRB) were trapped in the distal air space of the isolated vascular-perfused left lung lobes while the airways were blocked by immiscible O2-carrying fluorocarbon. Lobe weight was lost or gained in response to colloid gradients and was raised by metabolic inhibitors but did not change with only fluorocarbon in the air space or in response to modifiers of epithelial ion transport. When serum was added to the KRB-colloid perfusion, weight loss occurred in the absence of a colloid gradient (3.4 ml/min) and was Na+ dependent (inhibited by luminal Na(+)-free KRB). The change in the concentration of blue dextran in liquid sampled by micropuncture from subpleural alveoli was smaller than expected from lobe weight under basal conditions or with a colloid gradient, even though the volume marker accurately detected edema formation (weight gain) induced by metabolic inhibitors. We conclude that 1) weight changes represent volume absorption from the air spaces, 2) serum stimulates a Na+ absorptive process, and 3) by exclusion, small airways and/or other subpopulations of alveoli are the site of this absorption.

L20 ANSWER 20 OF 32 MEDLINE on STN
ACCESSION NUMBER: 91183342 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2081328
TITLE: [Artificial blood in 1990: from a lifelong dream to today's reality].
Le sang artificiel en 1990: du reve de toujours a la realite d'aujourd'hui.
AUTHOR: Vigneron C
CORPORATE SOURCE: Centre Regional de Transfusion Sanguine, Universite de Nancy 1.
SOURCE: Bulletin de l'Academie nationale de medecine, (1990 Oct) Vol. 174, No. 7, pp. 947-57; discussion 957-8.
Journal code: 7503383. ISSN: 0001-4079.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199105
ENTRY DATE: Entered STN: 26 May 1991
Last Updated on STN: 26 May 1991
Entered Medline: 9 May 1991

AB Human blood is a very complex tissue. Therefore the idea of rediscovery its different cellular and plasmatic constituents would seem to be utopic. To be efficient the oxygen carrier, be it natural or by synthesis, must be stripped of antigenicity, be easily stockable and transportable. Thus these properties permit its use in urgent circumstances (accidents, natural disasters, war...), in those countries where there is a non existent or limited transfusional structure. This, under certain conditions, during very specific pathologies (localised ischemia for example). Among several hypotheses, they are two main lines of research that of "hemoglobin solutions" the oldest and the most physiological. This will be developed here in more lengthy terms due to our personal work on the subject. The second line of research concerns fluorocarbons, the most modern and artificial and without doubt better known to doctors and the public. 1. HEMOGLOBIN SOLUTIONS. Other than nephrotoxicity, which has proved affordable, research han revealed four large limitations with hemoglobin solutions (a high affinity for oxygen due to absence or loss of 2.3 DPG, a short half life due to vascular loss, rapid dimerisation and elimination of urine, insufficient concentration of prepared solutions (70 g/L) with as a result a weak oncotic pressure and oxygen supply, oxidation in methemoglobin). In order

to overcome the two inconveniences, proposals were made to modify hemoglobin chemically, the idea coming from the putting into operation of potential analogues to or substitutes for 2.3 DPG which it is advisable to bring or to keep--by covalent bonding--near to the fixation site of the natural ligand. Thus our group has already deposed several patents and is now working on a complex hemoglobin-dextran benzine tetracarboxylate which appears promising. Today, due to the quality and reproduction of the results obtained on animals with chemically modified hemoglobin preparations clinical assays should be carried out soon. 2. FLUOROCARBONS. In this very different approach which uses totally synthetic compounds oxygen carrying can only be realised in dissolved form. Due to this fluorocarbons, even though they are remarkable solvents of gas, do not reach their full efficiency unless the patient breathes in a very rich oxygen atmosphere. This is therefore a considerable limiting factor. The other big problem is the insolubility of these compounds and therefore the need to emulsify them, but unfortunately these emulsions are difficult, if not impossible to stabilise.(ABSTRACT TRUNCATED AT 400 WORDS)

L20 ANSWER 21 OF 32 MEDLINE on STN

ACCESSION NUMBER: 88326684 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2458118
TITLE: The effect of hemodilution with fluorocarbon or dextran on regional myocardial flow and function during acute coronary stenosis in the pig.
AUTHOR: Biro G P; White F C; Guth B D; Breisch E A; Bloor C M
CORPORATE SOURCE: Department of Pathology, University of California, San Diego, School of Medicine, La Jolla 92093.
CONTRACT NUMBER: HL32670 (NHLBI)
SOURCE: The American journal of cardiovascular pathology, (1987 Jan) Vol. 1, No. 1, pp. 99-114.
Journal code: 8702438. ISSN: 0887-8005.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198810
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 26 Oct 1988

AB The effect of replacement of approximately 50% of the blood volume, in the presence of critical coronary stenosis, was investigated in anesthetized pigs. Two agents were used for replacement: 6% dextran 70 and Fluosol-DA, a fluorocarbon "blood substitute," capable of transporting oxygen by virtue of its high solubility. Critical coronary stenosis of 15-min duration was imposed on the circumflex coronary artery by means of a micrometer snare, before and after an exchange-transfusion with one of the above acellular agents, resulting in comparable reductions of myocardial blood flow (determined by microspheres) to the circumflex zone. In the ischemic zone, systolic wall-thickening (as determined by sonomicrometry) was reduced by 62 +/- 10% in the dextran-diluted pigs, but only by 33 +/- 7% in the Fluosol-diluted pigs (p less than .05). Estimated oxygen delivery-rate in this zone, during coronary constriction, was 6.2 and 7.5 ml min-1 100 g-1, respectively. Electron microscopic examination of the normally perfused zone of the heart showed no morphological change attributable to Fluosol. The findings suggest that, in the presence of critical coronary stenosis, hemodilution by Fluosol-DA can be tolerated, while similar hemodilution with dextran results in aggravation of myocardial hypoxia. In three instances, severe reactions were observed immediately following the administration of Fluosol. These were suggestive of complement-activation and were excluded from the analysis.

L20 ANSWER 22 OF 32 MEDLINE on STN

ACCESSION NUMBER: 88180337 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2451396
TITLE: A comparative study of the effects of hemodilution with dextran and fluorocarbon emulsion on the changes in blood viscosity and collateral flow during myocardial ischemia.
AUTHOR: Ma X L; Zhao R R; Zang Y M; Wang F Z
SOURCE: Yao xue xue bao = Acta pharmaceutica Sinica, (1987 Sep) Vol. 22, No. 9, pp. 641-4.
Journal code: 21710340R. ISSN: 0513-4870.
PUB. COUNTRY: China
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Chinese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198804
ENTRY DATE: Entered STN: 8 Mar 1990
Last Updated on STN: 29 Jan 1996
Entered Medline: 28 Apr 1988

L20 ANSWER 23 OF 32 MEDLINE on STN
ACCESSION NUMBER: 88046114 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2445179
TITLE: Critical oxygen delivery levels during shock following normoxic and hyperoxic haemodilution with fluorocarbons or dextran.
AUTHOR: Faithfull N S; Cain S M
CORPORATE SOURCE: Department of Physiology and Biophysics, University of Alabama at Birmingham 35294.
CONTRACT NUMBER: HL 14693 (NHLBI)
SOURCE: Advances in experimental medicine and biology, (1987) Vol. 215, pp. 79-87.
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198712
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 4 Dec 1987

AB Fluosol-DA 20% (FDA), an emulsion of fluorocarbons in a glucose electrolyte solution can deliver physiologically significant amounts of oxygen (O2) to the tissues and improve ischaemic hypoxia. To investigate its effect on critical oxygen delivery level (QO2c), four groups of six phenobarbitone anaesthetised air-ventilated splenic clamped mongrel dogs were haemodiluted to a haematocrit (Hct) of 25%; two groups with FDA and two with 6% dextran solution. Oxygen consumption (VO2) was derived from expired gas measurement and analysis, or by using a spirometer and carbon dioxide absorption. Whole body O2 flux (QO2) was calculated from mixed venous and arterial O2 contents and the Fick-derived cardiac output. QO2 was progressively decreased by haemorrhaging in steps of 1.5-2.5 ml per kg. Hct was kept at 25% using packed cells. VO2/QO2 pairs were calculated at each step and QO2c was determined for each animal by least squares fitting of data with 2 straight lines. Analyses of variance were performed. QO2c was significantly less in the FDA and O2 (F+O) group than either the dextran and O2 (D+O) or dextran and air (D+A) groups. Analysis of O2 extraction at QO2c, which effectively normalized results for differences in resting, VO2, had significantly better extraction in the FDA and air (F+A) than the D+A group. When fluorocarbon- and plasma-dissolved oxygen was subtracted, the O2 extraction in the F+A group was significantly better than in the D+A and F+O groups. The results imply that normoxic FDA haemodilution in animals respiring air can improve O2 delivery and that hyperoxia interferes with this process.

L20 ANSWER 24 OF 32 MEDLINE on STN
ACCESSION NUMBER: 88042844 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2445037
TITLE: Effect of fluorocarbon emulsion and dextran on the collateral oxygen-supply to the ischemic myocardium.
AUTHOR: Ma X L; Zhao R R; Zang Y M; Wang F Z
SOURCE: Sheng li xue bao : [Acta physiologica Sinica], (1987 Jun) Vol. 39, No. 3, pp. 242-7.
Journal code: 20730130R. ISSN: 0371-0874.
PUB. COUNTRY: China
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Chinese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198712
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 15 Dec 1987

L20 ANSWER 25 OF 32 MEDLINE on STN
ACCESSION NUMBER: 87000349 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2428389
TITLE: Effects of haemodilution with fluorocarbons or dextran on oxygen tensions in the acutely ischaemic myocardium.
AUTHOR: Faithfull N S; Erdmann W; Fennema M; Kok A
SOURCE: British journal of anaesthesia, (1986 Sep) Vol. 58, No. 9, pp. 1031-40.
Journal code: 0372541. ISSN: 0007-0912.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198610
ENTRY DATE: Entered STN: 2 Mar 1990
Last Updated on STN: 2 Mar 1990
Entered Medline: 30 Oct 1986

AB The effect of haemodilution with dextran or with oxygen transporting fluorocarbons (Fluosol-DA 20%) on myocardial oxygen tension (PmO2) during experimental myocardial ischaemia was studied in pigs. Polarographic oxygen microelectrodes were introduced 3 mm to the left ventricle wall and the distal one-third of the left anterior descending coronary artery (LAD) was occluded. Anaesthesia was maintained with 0.5% halothane in oxygen to ensure maximal oxygen content of the fluorocarbons. The animals were divided into three groups of five animals each. In group I no treatment was given and in groups II and III, after bleeding 20 ml kg-1, haemodilution was performed with Fluosol-DA 20% or 5% dextran respectively. Occlusion of the LAD caused no significant changes in cardiovascular vascular variables and only in group III (dextran) were significant effects of haemodilution observed. LAD occlusion caused highly significant decreases in PmO2. After haemodilution, PmO2 in the Fluosol group II (in contrast to groups I and III) was no longer significantly different from pre-occlusion values. After 5 h of occlusion, mean PmO2 in this group had returned to 92.2% of the pre-occlusion values, whereas in groups I and III it was 27.8% and 33.7%, respectively.

L20 ANSWER 26 OF 32 MEDLINE on STN
ACCESSION NUMBER: 85019965 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6207721
TITLE: Effects of fluorocarbons with and without oxygen supplementation on cardiac hemodynamics and energetics.
AUTHOR: Rude R E; Bush L R; Tilton G D

CONTRACT NUMBER: 1-KOS-HL-0882-02 (NHLBI)
HL-17869 (NHLBI)
SOURCE: The American journal of cardiology, (1984 Oct 1) Vol. 54, No. 7, pp. 880-3.
Journal code: 0207277. ISSN: 0002-9149.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198411
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 2 Nov 1984

AB Because of uncertainty about the mechanism by which fluorocarbons ameliorate myocardial ischemia, the effects of a fluorocarbon emulsion, perfluorodecalin and perfluorotripropylamine (Fluosol-DA 20% TM) with and without 100% O2 inhalation, on cardiac hemodynamics and energetics were studied in the anesthetized dog. Left ventricular (LV) intramural partial pressure of oxygen (PmO2) was measured by mass spectrometry before and after intravenous infusion of Fluosol-DA 20% (40 ml/kg), and was compared with measurements made in another group of dogs receiving the volume expander dextran (36 ml/kg). Both groups of dogs were then ventilated with 100% O2 and repeat measurements were performed. In the 11 animals receiving fluorocarbons, there were increases in left atrial pressure, LV myocardial blood flow, and LV myocardial O2 consumption (MVO2) compatible with volume expansion. After 100% O2, LV MVO2 decreased to control values, while PmO2 increased to 127 +/- 48 mm Hg (p less than 0.001). There were no significant changes in heart rate, arterial pressure or first derivative of LV pressure (dP/dt) during the study. In 10 dogs treated with dextran there was no change in heart rate or dP/dt, but arterial and left atrial pressures were higher after dextran infusion and remained elevated after 100% O2 inhalation. LV MVO2 increased with volume expansion, and remained increased after 100% O2. PmO2 (66 +/- 18 mm Hg) after 100% O2 was lower (p less than 0.02) than in the fluorocarbon-treated dogs after O2 inhalation.(ABSTRACT TRUNCATED AT 250 WORDS)

L20 ANSWER 27 OF 32 MEDLINE on STN
ACCESSION NUMBER: 85015992 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6484298
TITLE: Effects of volume expansion with Fluosol-DA on renal function of the nonhuman primate.
AUTHOR: Roccaforte W H; Wesley C R; Gilmore J P
CONTRACT NUMBER: 13427
SOURCE: Renal physiology, (1984) Vol. 7, No. 5, pp. 293-8.
Journal code: 7901911. ISSN: 0378-5858.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198411
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 26 Jul 1996
Entered Medline: 20 Nov 1984

AB The renal responses to an intravenous infusion of a high 02 affinity fluorocarbon equal to 15% of the estimated blood volume was determined in 5 monkeys and 1 baboon. In response to the infusion, blood pressure, renal plasma flow and glomerular filtration rate did not change significantly while heart rate and central venous pressure increased transiently. Significant increases in sodium and potassium excretion and osmolal and free-water clearances occurred. The renal responses to Fluosol-DA (20%) mimic in general those observed when blood volume is expanded with isotonic isooncotic dextran solutions.

L20 ANSWER 28 OF 32 MEDLINE on STN
ACCESSION NUMBER: 83128789 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6186351
TITLE: Fluorocarbon and dextran hemodilution in myocardial ischemia.
AUTHOR: Biro G P
SOURCE: Canadian journal of surgery. Journal canadien de chirurgie, (1983 Mar) Vol. 26, No. 2, pp. 163-8.
Journal code: 0372715. ISSN: 0008-428X.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198304
ENTRY DATE: Entered STN: 18 Mar 1990
Last Updated on STN: 18 Mar 1990
Entered Medline: 21 Apr 1983

AB The effect of hemodilution, with a fluorocarbon erythrocyte substitute and with dextran, on myocardial ischemia induced by occlusion of the left anterior descending coronary artery was investigated in anesthetized dogs. The resulting changes were compared to those in a control group subjected to a sham-exchange procedure. The hematocrit was reduced to 23% to 26% by dilution with fluorocarbon and dextran, while it was maintained at 42% to 46% in the control group. At similar hematocrit levels, during ventilation with 100% oxygen, the fluorocarbon-diluted blood transported 4 ml/dl more oxygen in the plasma phase than the dextran-diluted blood. Left ventricular function was not significantly altered and there was a marked improvement of blood flow to the ischemic zone. The mass of dehydrogenase-stained ischemic myocardium (21% of left ventricular mass) was marginally (p less than 0.06) smaller in the dogs with fluorocarbon-diluted blood than in the control group (29% of left ventricular mass). The output of creatine phosphokinase by the heart was also reduced (p less than 0.05) by hemodilution with fluorocarbon . These findings suggest that hemodilution with an oxygen-transporting blood substitute may have marginal beneficial effects on the collateral perfusion of acutely ischemic myocardium following sudden coronary artery occlusion.

L20 ANSWER 29 OF 32 MEDLINE on STN
ACCESSION NUMBER: 82259187 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6179621
TITLE: Comparison of acute cardiovascular effects and oxygen-supply following haemodilution with dextran , stroma-free haemoglobin solution and fluorocarbon suspension.
AUTHOR: Biro G P
SOURCE: Cardiovascular research, (1982 Apr) Vol. 16, No. 4, pp. 194-204.
Journal code: 0077427. ISSN: 0008-6363.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198210
ENTRY DATE: Entered STN: 17 Mar 1990
Last Updated on STN: 17 Mar 1990
Entered Medline: 21 Oct 1982

AB Changes in haemodynamics and myocardial oxygen-supply were investigated in anaesthetised dogs, when the haematocrit was reduced to 18 to 22% by isovalaemic haemodilution with 8% stroma-free haemoglobin solution, 20% Fluosol-DA and 6% dextran 70. Comparable haemodilution and comparable reduction in whole-blood viscosity was not followed by similar changes in cardiac output: dextran- and Fluosol-diluted dogs showed significantly

elevated cardiac output, while haemoglobin-diluted dogs failed to do so. As a result, systemic O2-transport was better maintained with dextran and Fluosol. Myocardial blood flow, estimated by 15 micrometers microspheres, increased in all three haemodiluted groups, but oxygen-supply was not similar. The haemoglobin-diluted dogs showed inadequate O2-supply suggested by a fall of coronary sinus pO2; dextran-diluted dogs exhibited adequate O2-supply suggested by maintained coronary sinus pO2, while the Fluosol-diluted group enjoyed excessive O2-supply, indicated by a markedly elevated pO2 in coronary sinus blood. The observations suggest that similar degrees of haemodilution may not be followed by comparable changes in haemodynamics and O2-supply, depending on O2-unloading characteristics.

L20 ANSWER 30 OF 32 MEDLINE on STN
ACCESSION NUMBER: 81209550 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7016272
TITLE: Insulin secretion by the perfused pancreas of the cold-acclimated rat.
AUTHOR: Baroody G M; Howland R J
SOURCE: Canadian journal of physiology and pharmacology, (1980 Dec) Vol. 58, No. 12, pp. 1426-30.
Journal code: 0372712. ISSN: 0008-4212.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198108
ENTRY DATE: Entered STN: 16 Mar 1990
Last Updated on STN: 16 Mar 1990
Entered Medline: 10 Aug 1981

AB Rats were acclimated to cold at 4 degrees C for a period of 42 days. Pancreases of normal and cold-acclimated rats were isolated and perfused with a Krebs-Henseleit bicarbonate medium containing dextran, adenosine, glucose, and a fluorocarbon as oxygen carrier. The biphasic secretion pattern of insulin in response to glucose stimulation was evident in both groups. Both basal and glucose-induced insulin release from pancreases of cold-acclimated rats exhibited a very significant reduction in comparison with controls (p less than 0.001). These observations are interpreted as indicating that cold-acclimation, an altered steady state of metabolism, is characterized by enhanced sympathetic activity which reduces insulin availability and release. Consequently enhanced free fatty acid mobilization resulting from reduced inhibition by insulin of lipolysis in the peripheral fat depots and increased lipolysis resulting from sympathetic activation are seen.

L20 ANSWER 31 OF 32 MEDLINE on STN
ACCESSION NUMBER: 76046119 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1184512
TITLE: Physiological evidence consistent with the presence of a specific O2 carrier in the placenta.
AUTHOR: Gurtner G; Burns B
SOURCE: Journal of applied physiology, (1975 Nov) Vol. 39, No. 5, pp. 728-34.
Journal code: 0376576. ISSN: 0021-8987.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197601
ENTRY DATE: Entered STN: 13 Mar 1990
Last Updated on STN: 13 Mar 1990
Entered Medline: 29 Jan 1976

AB In 30 experiments we perfused the fetal side of the sheep placenta with fluids which had different solubilities for argon, N2, and O2 (dextran, blood, and fluorocarbon emulsions). In some of

the experiments we partially exchange-transfused the ewe with the fluorocarbon emulsion. By these procedures we were able to change the physical solubility of argon and N2 severalfold in the fetal perfusion fluid and maternal blood. We found that the diffusing capacity for argon and N2 did not increase with increases in physical solubility in the fetal perfusion medium or in maternal blood. This indicated that the rate-limiting step in the placental transfer of these gases is the small diffusing capacity of the placenta. In contrast, O2 diffusing capacity increased markedly with increased solubility in the fetal perfusion medium. Also the Po2 was frequently the same in the venous blood leaving both sides of the placenta. This indicates that O2 may reach equilibrium between maternal and fetal capillaries in one pass through the placenta. The results are compatible with the presence of specific O2 carrier in the placenta.

L20 ANSWER 32 OF 32 MEDLINE on STN
ACCESSION NUMBER: 75149810 MEDLINE
DOCUMENT NUMBER: PubMed ID: 805063
TITLE: "Bloodless" rats through the use of artificial blood substitutes.
AUTHOR: Geyer R P
SOURCE: Federation proceedings, (1975 May) Vol. 34, No. 6, pp. 1499-1505.
Journal code: 0372771. ISSN: 0014-9446.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197507
ENTRY DATE: Entered STN: 10 Mar 1990
Last Updated on STN: 10 Mar 1990
Entered Medline: 28 Jul 1975

AB Artificial blood substitutes have been prepared with liquid fluorocarbons, Pluronic polyols, hydroxyethyl starch, electrolytes, and bicarbonate buffer. Dispersing the fluorocarbons is by sonication in the presence of the polyols. A CO-2 atmosphere is provided to prevent the formation of fluoride ions which otherwise form. Viscosity, oncotic pressure, osmotic pressure, and pH are adjusted to that of rat blood. With such preparations all of the normal blood of rats can be replaced. Such animals survive, carry out usual functions, regenerate blood cells and plasma protein, and continue to grow and develop. Volumes up to 30 times the blood volume of the rat have been perfused. Perfluorotributylamine has been the most successful of the fluorocarbons, in spite of its prolonged retention in the tissues, but progress has been made with the perfluorodecalins which leave the tissues rapidly. "Bloodless" rats show no reaction to dextran which ordinarily causes acute hypersensitivity reactions in normal rats. Rabbit antirat serum, which has little effect on normal rats, is toxic to "bloodless" rats. Lack of circulating enzymes in "bloodless" rats. Lack of circulating enzymes in "bloodless" rats allows a) specific enzymes to be given to achieve the enzyme profile desired; and b) enzyme-labile compounds to be kept in circulation. "Bloodless" rats made possible by artificial blood substitutes afford a new biomedical research tool.

L20 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:640392 CAPLUS
DOCUMENT NUMBER: 143:159285
TITLE: Biomimetic fluorocarbon surfactant polymers designed for use on small diameter ePTFE vascular graft
AUTHOR(S): Wang, Shuwu
CORPORATE SOURCE: Case Western Reserve Univ., Cleveland, OH, USA
SOURCE: (2004) 203 pp. Avail.: UMI, Order No. DA3146535 From: Diss. Abstr. Int., B 2005, 65(8), 4141
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L20 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:286175 CAPLUS
DOCUMENT NUMBER: 141:8881
TITLE: Fluorocarbon Surfactant Polymers: Effect of Perfluorocarbon Branch Density on Surface Active Properties
AUTHOR(S): Wang, Shuwu; Marchant, Roger E.
CORPORATE SOURCE: Department of Biomedical Engineering and Macromolecular Science, Case Western Reserve University, Cleveland, OH, 44106, USA
SOURCE: Macromolecules (2004), 37(9), 3353-3359 CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We describe a series of fluorocarbon surfactant polymers designed for modifying fluorocarbon surfaces such as poly(tetrafluoroethylene). Novel fluorocarbon surfactant polymers poly(N-vinyldextranaldonamide-co-N-vinylperfluoroundecanamide), in which hydrophilic dextran oligosaccharides and hydrophobic perfluoroundecanoyl groups were incorporated sequentially onto a poly(vinylamine) backbone, were synthesized and characterized by FT-IR, NMR, and XPS spectroscopy. By adjusting the feed ratio of dextran to fluorocarbon branches, surfactant polymers with different hydrophilic/hydrophobic balances were prepared The surface activity of the surfactants at the air/water interface was demonstrated by significant redns. in water surface tension. Surfactant adsorption and adhesion at the solid PTFE/aqueous interface were examined under well-defined dynamic flow conditions, using a rotating disk system. The surface activity at the air/water interface and adhesion stability on PTFE under an applied shear stress both increase with increasing d. of fluorocarbon branches on the polymer backbone. The results show that stable surfactant adhesion on PTFE can be achieved by adjusting the hydrophilic dextran to hydrophobic fluorocarbon branch ratio.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:181495 CAPLUS
TITLE: Fluorocarbon surfactant polymers derived from poly(vinyl amine) with pendant dextran and perfluorocarbon groups
AUTHOR(S): Wang, Shuwu; Marchant, Roger E.
CORPORATE SOURCE: Department of Biomedical Engineering, Case western reserve university, cleveland, OH, 44106, USA
SOURCE: Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), COLL-392. American Chemical Society: Washington, D. C.
CODEN: 69DSA4

DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB We report an novel fluorocarbon surfactant polymer: poly(N-vinyldextran aldonamide-co-N vinylperfluroundecanamide) (PVAm-Dex-FC11), designed to modify fluorocarbon surfaces like PTFE. Hydrophilic dextran oliogosaccharides and hydrophobic perfluoroundecanoyl groups were sequentially incorporated on to poly(vinyl amine) backbone, were synthesized, and characterized by FT-IR, NMR and XPS spectroscopy. Surface activity of the surfactant polymers increases with increasing hydrophobic content in the polymer structure. Surfactant adhesion on PTFE surface was tested under aqueous dynamic flow conditions using rotating disk system. By adjusting dextran to fluorocarbon ratio, stable surfactant adhesion on PTFE was achieved at 0-20 dyn/cm2 for up to 1 h. The results demonstrate the potential of fluorocarbon surfactant polymer to be used in modification of fluorocarbon polymer surfaces.

L20 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:629879 CAPLUS
DOCUMENT NUMBER: 139:90108
TITLE: Production technology and application of polyfunctional magnetically guided superparamagnetic preparations (A Review)
AUTHOR(S): Brusentsov, N. A.; Baiburtskii, F. S.; Tarasov, V. V.; Komissarova, L. Kh.; Filippov, V. I.
CORPORATE SOURCE: Blokhin Oncological Research Center, Russian Academy of Medical Sciences, Moscow, Russia
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2002), 36(4), 197-205
CODEN: PCJOAU; ISSN: 0091-150X
PUBLISHER: Kluwer Academic/Consultants Bureau
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The production technol., properties and applications of superparamagnetic polyfunctional magnetically guided prepns. based on ferrimagnetic compds., dextran and carboxymethyl dextran , fluorocarbons,and polyglobin and ferrocarbon are discussed. Such ferrimagnetic fluids can be used as magnetic carriers for drug delivery, antibodies, enzymes, X-ray and NMR contrast agents immobilized in magnetic drops. Some technol. aspects of the synthesis of magnetic liposomes capable of carrying antitumor drugs and contrast agents are considered.
REFERENCE COUNT: 134 THERE ARE 134 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:638315 CAPLUS
TITLE: Biomimetic fluorocarbon surfactant polymers: Design and applications
AUTHOR(S): Wang, Shuwu; Marchant, Roger E.
CORPORATE SOURCE: Department of Biomedical Engineering, Case Western Reserve University, Cleveland, OH, 44106, USA
SOURCE: Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), COLL-279. American Chemical Society: Washington, D. C.
CODEN: 69BUZP
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB The approach of utilizing self-assembled monolayer of polymeric surfactant to modify fluorocarbon biomaterial PTFE (polytetrafluoroethylene) was studied. The primary hypothesis is that

thermodn. compatibility between the surfactant and the materials is essential in controlling the surfactant adsorption and adhesion. In this investigation, a series of novel fluorocarbon surfactant polymers: poly(N-vinyldextran aldonamide-co-N vinylperfluroundecanamide), in which hydrophilic dextran oliogosaccharides and hydrophobic perfluoroundecanoyl groups were sequentially incorporated on to poly(vinylamine), were synthesized and characterized by FT-IR, NMR and XPS spectroscopy. Surface activity was demonstrated by significant redns. in water surface tension and water contact angle of PTFE after modification. The preliminary results demonstrated the potential of the fluorocarbon surfactant polymer to be used in surface modification of fluorocarbon biomaterials like PTFE and ePTFE (expanded polytetrafluoroethylene).

L20 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:7554 CAPLUS
DOCUMENT NUMBER: 116:7554
TITLE: Modification of membrane surfaces by plasma deposition of thin fluorocarbon films without affecting bulk properties
AUTHOR(S): Clarotti, Giorgio; Ait Ben Aoumar, Abdallah; Schue, Francois; Sledz, Joseph; Geckeler, Kurt Ernst; Floesch, Dietmar; Orsetti, Andre
CORPORATE SOURCE: Lab. Chim. Macromol., Univ. Montpellier II, Montpellier, 34095, Fr.
SOURCE: Makromolekulare Chemie (1991), 192(11), 2581-90
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The deposition of a thin coating from a perfluorohexane and H plasma on polysulfone and polyhydroxybutyrate membranes to optimize their surface properties without affecting their filtering properties was studied. The treated substrates were characterized by mass variations, surface profilometry and contact angle measurements, as well as SEM and electron spectroscopy for chemical anal. The plasma deposition of smooth and very hydrophobic fluorocarbon coatings seemed to increase the bio- and hemocompatibility of poorly biocompatible membranes.

L20 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:563192 CAPLUS
DOCUMENT NUMBER: 109:163192
TITLE: Prophylaxis and treatment of myocardial ischemia by hemodilution with fluorocarbon emulsions
AUTHOR(S): Faithfull, N. S.; Fennema, M.; Erdmann, W.
CORPORATE SOURCE: Dep. Anaesthes., Erasmus Univ. Rotterdam, Rotterdam, Neth.
SOURCE: Advances in Experimental Medicine and Biology (1987), 215(Oxygen Transp. Tissue 9), 89-95
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In pigs, 20 mL/kg of blood was replaced with Fluosol DA prior to left anterior descending artery occlusion, with some of the pigs receiving another similar volume replacement with Fluosol DA or 5% dextran solution 1 h later. The cardiac output was higher and system vascular resistance was lower in the group diluted with the fluorocarbon prior to ischemia. Postinfarction, the fluorocarbon hemodilution produced a higher cardiac output, and, at 1 h after hemodilution, a decreased peripheral resistance. Vascular resistance and arterial pressure also were decreased by dextran, but cardiac output was unchanged.

L20 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:563191 CAPLUS

DOCUMENT NUMBER: 109:163191
TITLE: Critical oxygen delivery levels during shock following normoxic and hyperoxic hemodilution with fluorocarbons or dextran
AUTHOR(S): Faithfull, N. S.; Cain, S. M.
CORPORATE SOURCE: Dep. Physiol. Biophys., Univ. Alabama, Birmingham, AL, 35294, USA
SOURCE: Advances in Experimental Medicine and Biology (1987), 215(Oxygen Transp. Tissue 9), 79-87
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Hemodilution with Fluosol DA 20%, with or without addnl. O, increased the whole body O extraction in dogs as compared with animals hemodiluted with 6% dextran in Tyrode's solution Hyperoxia alone decreased O extraction Thus, fluorocarbon emulsions may prove useful in enhancing O delivery in hemorrhagic shock.

L20 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:106143 CAPLUS
DOCUMENT NUMBER: 108:106143
TITLE: Effect of fluorocarbon emulsion and dextran on the collateral oxygen supply to ischemic myocardium
AUTHOR(S): Ma, Xinliang; Zhao, Rongrui; Zang, Yimin; Wang, Fuzhou
CORPORATE SOURCE: Dep. Physiol., Shanxi Med. Coll., Taiyuan, Peop. Rep. China
SOURCE: Shengli Xuebao (1987), 39(3), 242-7
CODEN: SLHPAH; ISSN: 0371-0874
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Expts. were performed in 14 anesthetized open-chest dogs to study the change in the relationship between myocardial O consumption and O supply to ischemic myocardium after hemodilution with fluorocarbon emulsion (perfluorotripropylamine, PFTA) and dextran. Myocardial O consumption was assessed by measuring the left ventricular systolic pressure-time index (SPTI) and collateral O supply to ischemic myocardium was calculated from effective collateral flow (ECF), partial pressure of O in arterial blood (PaO2), and Hb concentration After hemodilution with dextran, SPTI was transiently increased (7.1% at 30 min after hemodilution, 2.8% at 60 min after hemodilution)and ECF was obviously increased (58.5% at 30 min hemodilution); no significant change in the relationship between myocardial consumption and O supply to ischemic myocardium was observed After hemodilution with PFTA, the change in SPTI was the same as that with dextran (2.5% at 30 min after hemodilution, 1.9% at 60 min after hemodilution). However, ECF and PaO2 were increased significantly (53.9% and 93%, resp., at 30 min after hemodilution), so that O supply to ischemic myocardium was increased distinctly and the imbalance of myocardial O consumption and O supply in the marginal ischemic zone was improved tremendously.

L20 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:16039 CAPLUS
DOCUMENT NUMBER: 108:16039
TITLE: Comparative effects of hemodilution with dextran and fluorocarbon emulsion on the changes in blood viscosity and collateral flow during myocardial ischemia
AUTHOR(S): Ma, Xinliang; Zhao, Rongrui; Zhang, Yimin; Wang, Fuzhou
CORPORATE SOURCE: Res. Lab. Cardiovasc. Physiol., Shanxi Med. Coll., Taiyuan, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1987), 22(9), 641-4

CODEN: YHHPAL; ISSN: 0513-4870
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The effects of hemodiln. with dextran and fluorocarbon emulsion-III (FCE-III, 20% perfluorotripropylamine) on the changes in blood viscosity and collateral flow following coronary occlusion were studied in anesthetized open-chest dogs. After hemodiln. with FCE-III, the blood viscosity was decreased by 41%, erythrocyte aggregating index decreased by 26.9%, and collateral blood flow and supply/demand ratio increased. Similar changes resulted from hemodiln. with dextran . In addition, hemodiln. with FCE-III increased pO2 and dissolved O and so increased O supply to the ischemic myocardium.

L20 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:526762 CAPLUS
DOCUMENT NUMBER: 107:126762
TITLE: The effect of hemodilution with fluorocarbon or dextran on regional myocardial flow and function during acute coronary stenosis in the pig
AUTHOR(S): Biro, George P.; White, Francis C.; Guth, Brian D.; Breisch, Eric A.; Bloor, Colin M.
CORPORATE SOURCE: Sch. Med., Univ. California, San Diego, La Jolla, CA, 92093, USA
SOURCE: American Journal of Cardiovascular Pathology (1987), 1(1), 99-114
CODEN: AJCPEM; ISSN: 0887-8005
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of replacement of .apprx.50% of the blood volume, in the presence of critical coronary stenosis, was investigated in anesthetized pigs. Two agents were used for replacement: 6% dextran 70 and Fluosol-DA, a fluorocarbon blood substitute, capable of transporting O by virtue of its high solubility In the ischemic zone, systolic wall-thickening (as determined by sonomicrometry) was reduced by 32% in the dextran -diluted pigs, but only by 33% in the Fluosol-diluted pigs. Estimated O delivery-rate in this zone, during coronary constriction, was 6.2 and 7.5 mL min-1 100 g-1, resp. Electron microscopic examination of the normally perfused zone of the heart showed no morphol. change attributable to Fluosol. Apparently, in the presence of critical coronary stenosis, hemodilution by Fluosol-DA can be tolerated, while similar hemodilution with dextran results in aggravation of myocardial hypoxia. In 3 instances, severe reactions were observed immediately following the administration of Fluosol. These were suggestive of complement-activation and were excluded from the anal.

L20 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:605953 CAPLUS
DOCUMENT NUMBER: 103:205953
TITLE: Tissue oxygenation by fluorocarbons
AUTHOR(S): Faithfull, N. S.; Fennema, M.; Erdmann, W.; Lapin, R.; Smith, A. R.; Van Alphen, W.; Essed, C. E.; Trouwborst, A.
CORPORATE SOURCE: Dep. Anaesth., Erasmus Univ., Rotterdam, Neth.
SOURCE: Advances in Experimental Medicine and Biology (1984), 180(Oxygen Transp. Tissue--6), 569-80
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In anesthetized, open-chest pigs with myocardial ischemia (induced by ligation of the left-anterior descending coronary artery), replacement of blood volume, after induced bleeding (20 mL/kg), with Flusol-DA [75216-20-5] caused an increase in O tension of the heart tissue; this was in contrast to untreated animals which showed a gradual decrease in the myocardial O tension or animals hemodiluted with dextran which

showed an immediate and large decrease in O tension. Pathol. changes in the myocardium from ischemia were also reversed by Fluosol-DA but not dextran hemodiln. The utility of the fluorocarbon in human limb preservation in replantation surgery was also demonstrated. Extracorporeal circulation of amputated extremities with Fluosol-DA improved microcirculatory oxygenation and maintained tissue viability for up to 48 h.

L20 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:622325 CAPLUS
DOCUMENT NUMBER: 101:222325
TITLE: Effects of fluorocarbons with and without oxygen supplementation on cardiac hemodynamics and energetics
AUTHOR(S): Rude, Robert E.; Bush, Larry R.; Tilton, Gregory D.
CORPORATE SOURCE: Health Sci. Cent., Univ. Texas, Dallas, TX, 75235, USA
SOURCE: American Journal of Cardiology (1984), 54(7), 880-3
CODEN: AJCDAG; ISSN: 0002-9149
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Because of uncertainty about the mechanism by which fluorocarbons ameliorate myocardial ischemia, the effects of a fluorocarbon emulsion, Fluosol-DA 20% (perfluorodecalin-perfluorotripropylamine mixt) [75216-20-5] with and without 100% O inhalation, on cardiac hemodynamics and energetics were studied in the anesthetized dog. Left ventricular (LV) intramural partial pressure of O (PmO) was measured by mass spectrometry before and after i.v. infusion of Fluosol-DA 20% (40 mL/kg), and was compared with measurements made in another group of dogs receiving the volume expander dextran (36 mL/kg). Both groups of dogs were then ventilated with 100% O and repeat measurements were performed. In the 11 animals receiving fluorocarbons, there were increases in left atrial pressure, LV myocardial blood flow, and LV myocardial O consumption (MVO) compatible with volume expansion. After 100% O, LV MVO decreased to control values, while PmO increased to 127 mm Hg. There were no significant changes in heart rate, arterial pressure or first derivative of LV pressure (dP/dt) during the study. In 10 dogs treated with dextran, there was no change in heart rate or dP/dt, but arterial and left atrial pressures were higher after dextran infusion and remained elevated after 100% O inhalation. LV MVO increased with volume expansion, and remained increased after 100% O. PmO (66 mm Hg) after 100% O was lower than in the fluorocarbon-treated dogs after O inhalation. Thus, the acute hemodynamic effects of Fluorsol-DA 20% are similar to those of a volume expander alone, but elevated left atrial pressure and LV MVO tend to be shorter lived than in dogs treated with dextran. After 100% O, LV MVO remained elevated in the dogs treated with dextran, but not in the fluorocarbon group. The extraordinarily high PmO attained in dogs treated with florocarbon-O is greater than that produced by volume expansion alone, and is not due to a measurable decrease in LV myocardial O demand. Thus, any beneficial effect of this fluorocarbon preparation on myocardial ischemia is likely due to enhanced O delivery rather than to reduced O demand.

L20 ANSWER 14 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:604069 CAPLUS
DOCUMENT NUMBER: 101:204069
TITLE: Effects of volume expansion with Fluosol-DA on renal function of the nonhuman primate
AUTHOR(S): Roccaforte, William H.; Wesley, Charles R.; Gilmore, Joseph P.
CORPORATE SOURCE: Coll. Med., Univ. Nebraska, Omaha, NE, USA
SOURCE: Renal Physiology (1984), 7(5), 293-8
CODEN: REPHDA; ISSN: 0378-5858
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The renal responses to an i.v. infusion of a high O2 affinity fluorocarbon fluosol-DA [75216-20-5], equal to 15% of the estimated blood volume was determined in 5 monkeys and 1 baboon. In response to the infusion, blood pressure, renal plasma flow and glomerular filtration rate did not change significantly while heart rate and central venous pressure increased transiently. Significant increases in sodium and potassium excretion and osmolal and free-water clearances occurred. The renal responses to Fluosol-DA (20%) mimic in general those observed when blood volume is expanded with isotonic iso-oncotic dextran solns.

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=> d his

     (FILE 'HOME' ENTERED AT 11:04:56 ON 05 JUL 2006)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 11:05:07 ON 05 JUL 2006
L1             0 S POLYSACHARIDE? (P) FLUOROCARBON (P) INHAL?
L2             0 S POLYSACCHARIDE? (P) FLUOROCARBON (P) INHAL?
L3             8 S POLYSACCHARIDE? (P) FLUOROCARBON?
L4             2 S POLYSACCHARIDE? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L5             5 S FLUOROCARBON? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L6             2 S FLUOROCARBON? (P) MOLECULAR WEIGHT? (P) INHAL?
L7             0 S FLUOROCARBON? (P) HYALURONIC ACID (P) MOLECULAR WEIGHT?
L8             1 S FLUOROCARBON? (P) HYALURONIC ACID
L9             2 S FLUOROCARBON? (P) CHONDROITIN
L10            0 S FLUOROCARBON? (P) HEPARAN
L11            4 S FLUOROCARBON? (P) HEPARIN
L12          211 S POLYSACCHARIDE? (P) GLYCOSAMINOGLYCAN? (P) MOLECULAR WEIGHT?
L13            0 S  GLYCOSAMINOGLYCAN? (P) FLUOROCARBON? (P) MOLECULAR WEIGHT?
L14            0 S  GLYCOSAMINOGLYCAN? (P) FLUOROCARBON?
L15           34 S  DRUG? (P) FLUOROCARBON? (P) PROPELLANT?
L16            0 S L15 AND POLYSACCHARIDE?
L17            2 S POLYSACCHARIDE? (P) PROPELLANT? (P) MOLECULAR WEIGHT?
L18           37 S FLUOROCARBON? (P) DEXTRAN?
L19            5 S L18 AND MOLECULAR WEIGHT?
L20           32 S L18 NOT L19
L21            0 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) PROPELLANT? (P) MOLECULA
L22          250 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) MOLECULAR WEIGHT?
L23            0 S ?POLYSACCHARIDE?  (P) CONJUGATE? (P) MOLECULAR WEIGHT? (P) FL
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